

Optimization on Wear Performance of Anti Wear Additive Added Biolubricant

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Abstract Waste cooking oil is hard to dispose of and harmful to the environment. Recently, a considerable amount of research has been done to improve the properties of engine oil. In this study, engine oil was blended with waste cooking oil and an oil treatment solution. The blended oil was tested in a tribological wear tester. There are three parameters (rotational speed, loads and ratio of waste cooking oil) was consider in the experiments. Tribology wear and properties of the blended oil were investigated in FESEM. It was found that abrasive wear, adhesive wear, fatigue wear and corrosive wear were introduced during the course of the experiments. Normally, corrosive wear was found to be the main dominant in the tribology wear. It was discovered that 5% addition of waste oil to the engine oil treatment and base lubricant performed better than other oil blends.

Keywords Lubricant · Speeds · Engine · Waste

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